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**LIGHT INFANTRY IN THE DEFENSE: EXPLOITING THE REVERSE SLOPE FROM WELLINGT. (U) ARMY COMMAND AND GENERAL STAFF COLL FORT LEAVENWORTH KS SCHOO. A GALLOWAY 02 DEC 85**

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LIGHT INFANTRY IN THE DEFENSE: EXPLOITING THE  
REVERSE SLOPE FROM WELLINGTON TO THE FALKLANDS AND BEYOND

by

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**Lieutenant Colonel Archibald Galloway  
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## ABSTRACT

**LIGHT INFANTRY IN THE DEFENSE: EXPLOITING THE REVERSE SLOPE FROM WELLINGTON TO THE FALKLANDS AND BEYOND, BY LIEUTENANT COLONEL ARCHIBALD GALLOWAY II, USA, 60 PAGES**

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Among the many conclusions drawn from this investigation are: the light infantry's current reverse slope doctrine lacks sufficiency; leadership is the crucial ingredient in reverse slope planning and execution; and the reverse slope defense is not one concept, but a host of concepts which include offensive opportunities, resourcefulness, and terrain options.

The study concludes that there exists sufficient historical evidence to support resurrection and implementation of the reverse slope technique in current U.S. Light Infantry doctrine and training. A comprehensive reverse slope doctrinal "cookbook" is provided as a basis for subsequent examination and study.

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## SECTION I. INTRODUCTION

If we look back on History, we cannot but be struck by the exceedingly important part that the appreciation or neglect of the capacities of ground has played in every campaign.  
--G.F.R. Henderson<sup>1</sup>

### BATTLEFIELD DYNAMICS

In the last twenty years, the protection of United States vital interests and global commitments have increasingly required that the U.S. Army be able to project its combat power anywhere in the world on short notice. In response to this difficulty, the Light Infantry initiatives of the mid-1980's were formulated as a means of enhancing this ability. Though a meaningful step in resolving the strategic deployability problem, these initiatives also confronted Army planners with an entirely new set of problems, seemingly more difficult and more perplexing. Specifically, how to structure and employ such a light force to ensure its survivability and effectiveness.

In the context of fighting on a dynamic battlefield, the full weight of these problems falls squarely in the lap of the light infantry. While the basic nature of warfare is essentially unchanged for this force, dynamic alternations occurring in the complexity, lethality, and tempo of modern warfare make finding a solution increasingly difficult. For light forces "the modern battlefield will be dense with large quantities of high quality combat systems whose range and lethality surpass anything in previous experience....the battle, especially in the area where the battle outcome is decided, is likely to be intense, quick and deadly."<sup>2</sup>

The issue then, is how light infantry can successfully fight "opponents whose military capabilities could vary from highly modern [firepower and protection-rich] mechanized forces of the Warsaw Pact to similarly organized Soviet clients in the Middle East or Northeast Asia, to lighter well-equipped forces in other parts of the world."<sup>3</sup> Light forces' success against such a threat will require extraordinary resourcefulness, cunning, and flexibility. In a recent Military Review article

"Proverbs of the Light Infantry," these and other characteristics are aptly referred to as the "light infantry attitude"--an attitude in which initiative, surprise, improvisation, and self-reliance are commonplace and in which "terrain is viewed as an ally, a combat multiplier for the light infantryman."<sup>4</sup>

The light infantry equation of "attitude plus terrain equals survivability" is deceptively simple. Yet, as the epigraph by G.F.R. Henderson plainly stated, "we cannot but be struck by the exceedingly important part that the appreciation or neglect of the capacities of ground has played in every campaign." In similar fashion, Sun Tsu, in his treatise The Art of War, reminds us that it is "the skillful commander [who] takes up a position in which he cannot be defeated and misses no opportunity to master his enemy."<sup>5</sup> That both of these propositions are applicable to both the offense and defense is evident to the light infantry tactician. The central question then is how should the light infantry use terrain to its best advantage in defeating firepower-rich adversaries?

Historically, we find that other nations have employed light infantry against firepower-rich adversaries and they have done so successfully by using defensive tactics that negate the enemy's firepower advantage, provide protection to friendly forces, and capitalize on light infantry's aggressiveness. One such tactic is the reverse slope defense. Unfortunately, our tactical doctrine for such operations is insufficient.

#### LIGHT INFANTRY EFFECTIVENESS

Though many theorists still suggest that the defense merely surrenders the initiative to the enemy, the fact remains its purpose is still quite valid. Unlike the doctrine of the active defense, the correct defensive form, as described in the current draft US Army Field Manual 100-5 Operations, should be determined by the terms of the mission, enemy, terrain, troops, and time available. Ideally, the defense then results in a bold, flexible, offense-oriented defense patterned after

Clausewitz's "shield made up of well-directed blows."<sup>6</sup> Though perhaps lacking our modern METT-T acronym, Captain Wilhelm Balck captured the essence of the correct defensive form in his 1897 book on Modern European Tactics when he said that "he who selects a clear and fixed object and puts forth his whole strength to attain it, is morally superior to him whose actions are regulated by those of the enemy."<sup>7</sup> As we assess the survivability, effectiveness, and moral superiority of light infantry forces in defensive operations, it becomes apparent that the one technique that is both unique and best suited to these forces (and dismounted infantry as well) is that of defending on the reverse slope.

In 1942, the eminent tactician Major F.O. Miksche stated that "reverse slope positions have lost much of their former value because of air observation. But such positions are still sheltered from enemy artillery if they lie in dead ground and cannot be seen from the ground until the enemy has passed them."<sup>8</sup> Miksche's understanding of the use of ground was remarkably perceptive except for his emphasis on the vulnerability of the reverse slope defense to air observation. This was disproved within two years in both the European and Pacific Theaters. The reverse slope defense worked as it always had in history, provided the user (generally light infantry forces) fully understood its intricacies.

#### DEFINITION

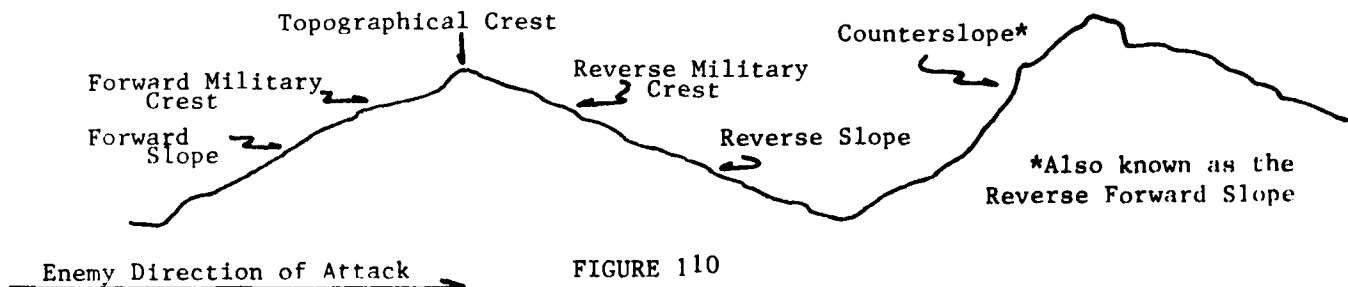
The most current literature on reverse slope defense, while not providing a specific definition of the reverse slope defense, suggests a wide range of characteristics about the subject from which a reader can deduce a definition. The current characteristics range from how the reverse slope is used, to what effect it has on one's enemies, to how to locate positions on it, to a description of its inherent strengths and weaknesses. FM 7-10, dated April 1970, provides possibly the simplest and most direct definition in declaring that

"a reverse slope defense is one organized on the portion of a terrain feature that is masked by a crest from enemy direct fire and ground observation."<sup>9</sup>

A broader perspective is achieved however if the following is added:

All or any part of a unit may be on the reverse slope, depending on an analysis of the mission, enemy, terrain, troops, and time available. A successful reverse slope defense is based on denying the topographical crest to the enemy by either fire or physical occupation. Ideally, the reverse slope will take the form of a bold, flexible, offense-oriented defense consisting of a 'shield made up of well-directed blows.'

If we analyze the following hypothetical piece of terrain in light of the above definition, the enemy situation, and terrain peculiarities (observation, fields of fire, etc.) we can label its features as follows:



The definitional framework above points to a final essential in developing a common basis of understanding--the need for a standard conceptual reverse slope description of how the technique works.

Ideally, the friendly unit prepares its position to maximize deception and surprise with the intent of causing the enemy to deploy early. If the intent is achieved, the enemy's attack is likely to become more piecemealed and harder to control and coordinate, particularly as his forces cross the exposed topographic crest. Crossing the crest, the enemy then enters unfamiliar terrain where all fires within the battle area are focused on his assault. Firing from covered and concealed positions throughout the battle area the defender maintains a distinct advantage over the exposed attacker, canalizing the attacker into kill zones. A counterattack, if required, is launched to deliver the final destructive blow and restore the FEBA.

While the above definitions are considered firm in the following discussion, the conceptual description is intended only as a point of reference. As we progress

through the reverse slope defense analysis, numerous lessons will coalesce which will alter this concept considerably.

#### RESOLVING THE ISSUE

With an understanding of the concept and terminology layed out above, this study will initially analyze the development and implementation of the reverse slope technique from the period of Wellington to the Korean War. A more contemporary analysis of the reverse slope technique as exhibited in the Falkland campaign will conclude with LTC John English's comment "that a reverse slope position need not necessarily be physically located on a reverse slope."<sup>11</sup> Though a concept out of the ordinary understanding of what a reverse slope defense is, it is nevertheless germane to our broader discussion.

This examination is designed to support the hypothesis that there exists, doctrinally and historically, sufficient evidence to support the resurrection and use of the reverse slope as a viable technique for enhancing the survivability and effectiveness of light infantry forces. The reverse slope defense has a place in modern light infantry doctrine.

This paper will discuss the policy, background, and historical perspective of the light infantry; review the doctrinal literature; trace the evolution of the reverse slope defense from Wellington to the Flakland Islands; examine contemporary influences on the light infantry; and apply the lessons learned to future doctrine.

## SECTION II. LIGHT INFANTRY AND THE REVERSE SLOPE DEFENSE-- A HISTORICAL PERSPECTIVE

Only general rules can be sketched here. Their appropriate appreciation to prevailing circumstances distinguishes the thinking officer from the one who considers his task mechanically, or seeks the perfect picture of war in the fitting together of learned evaluations.--Von Yorck, 1810<sup>12</sup>

### CURRENT POLICY FOCUS

The evolution of light infantry and its impact on the U.S. Army is easily discernible from even the most cursory reading of American military history. Over and over again, changes in politics, weapon systems, force structure, and tactics have required the light forces commander to adjust his style of warfare. These changes have been particularly apparent as American commanders sought the solutions to successful deployment of U.S. forces to foreign shores.

In World War II, Army leaders attempted to resolve the deployment problems by the creation of light divisions. According to Edward Luttwak, "between 1942 and 1944 the U.S. Army developed and raised 'light' divisions for much the same reasons that now motivate the Ninth Division initiative, namely the search for more easily deployed capabilities."<sup>13</sup> Unfortunately for the Army, none of the light divisions raised and tested during World War II were deployed overseas. Theater commanders felt that for the most part these divisions were too light and better configured as regular infantry divisions. "The light division had been made 'light' by depriving the formation of automatic weapons, indirect fire support, and logistics. There was, by contrast, no sustained effort to search for compensating advantages by means of innovative terrain-relational or context-relational tactics, or by technological innovation."<sup>14</sup> This approach has changed however.

Over two years ago, Army Chief of Staff General John A. Wickham, Jr. provided the initial guidance for the creation of the Army's new light infantry force. He recognized, as did his predecessor General Meyer, that "the nature of most contingency crises demands prompt action by military forces once the decision is made to



commit forces to a contingency area."<sup>15</sup> The operational keys to such a crisis are timing in the first days, and the ability to deploy a large force quickly. It is generally believed that such a force must consist of highly trained and highly motivated leaders and soldiers specializing in "terrain-relational tactics," night operations, and decentralized operations. Beyond these generalized statements about light forces, however, little specific information exists about how to achieve these requirements.

The light infantry initiative, therefore, is one of landmark proportion since it has substantially created the conditions for change in two vexing problems--force deployability and force structure. It is indeed an "effort to modernize our light forces in recognition of a continuing need for an immediate, credible deterrent capability in an increasingly violent world."<sup>16</sup>

In spite of what might appear to be a cure-all for the U.S., closer scrutiny of the light infantry's more complex tactical components shows that not all the problems have been solved. Specifically, current literature for the light infantry dictates that light soldiers will be unique, in terms of organization, training, and tactics. They are not merely to be lighter infantry doing something different. Unfortunately, despite generalizations that light forces will defend against light enemy forces on all types of terrain or that a light infantry defense consists of combinations of static and dynamic elements<sup>17</sup>, there remains an incompleteness in our present doctrine which addresses exactly how light forces might conduct a unique defensive operation. More to the point, I am referring to defensive operations requiring special (terrain-relational) considerations such as the web defense, elastic defense, and the reverse slope defense. The focus of this paper is the reverse slope.

#### REVIEW OF DOCTRINAL LITERATURE

In reviewing the available doctrinal literature on the reverse slope defense, I was disheartened, except in one instance, to see just how little contemporary information existed. Of five principal doctrinal sources reviewed (FM 100-5 Jun 85,

FM 7-20 Oct 80, FC 21-101 Jun 84, FM 90-6 Jun 80, FM 71-1 Jun 77) the reverse slope (the word) was specifically mentioned only twice, although the spirit of the technique was portrayed in one other three sources. Only FM 7-10 The Rifle Company, Platoons, and Squads (Jan 82) contained enough information to enable a reader to somewhat think through the process.

Historically, the existence of the reverse slope in our written doctrine has fared only marginally better. In several specially prepared American Expeditionary Force (A.E.F.) doctrinal pamphlets in the 1917-1918 period for instance, the subject surfaced briefly and only in discussions regarding organization of defensive sectors.<sup>18</sup> In the 1940 FM 7-5 Rifle Battalion, 1942 FM 7-10 Rifle Company, and 1942 and 1944 FM 7-10 Rifle Battalion, I found no specific mention of the subject. Likewise, in the 1941 and 1944 FM 100-5 Operations, there is little mention though a few specific "pro's" and "con's" tend to orient on mountain operations. Considering the experience that U.S. forces accumulated during fighting in the two major wartime theaters, it was most unfortunate (in terms of the lives lost) that their observations were not translated into doctrine in at least the 1944 series manuals. In fact, the rare mention of the reverse slope in the 1944 FM 100-5 appears to have been principally extracted from a 1931 French publication entitled "Provisional Instructions of the Operations of Large Units in Mountainous Terrain."<sup>19</sup> It seems the U.S. Army had few thoughts regarding the reverse slope either before or during the war.

Though several Infantry Journal articles during the 1944-45 period attempted to alert the Army to the necessity of the reverse slope, subsequent editions of FM 100-5 reflected little support or consideration of doctrinal discussion, on the other hand, appears to have been added many years later in the FM 7-10/20 series. To illustrate, the 1954 FM 7-10/20, in effect for almost ten years, provided an excellent summary of the subject, including advantages, disadvantages, and conduct of the operation. However, this information was expunged from the subsequent and current editions of the manual. The subject is absent in the current FM 7-10. Beginning

in December 1984, however, Fort Benning produced three field circulars (FC 7-13, 7-14, and 7-15) which alluded to the reverse slope defense at battalion, company, and squad levels, but still covered the subject inadequately. Irrespective of what may have been deleted from the current FM 7-20 or condensed in other literature, there remains arguably some doctrinal and historical base for reverse slope operations. It is a base of information that if properly tapped holds rich reward for light infantry forces.

#### HISTORICAL PERSPECTIVE

Writing for Infantry Journal in the winter of 1944, COL A.G. Foxx reported that "somehow, long-established tactical methods--even methods that have been in our manuals for years--often come as a surprise (and are reported as 'new')."20 In particular, COL Foxx was referring to the reverse slope defense and its use by German military forces in North Africa. The Germans were apparently using the technique successfully while American forces tried to unravel its apparent mysteries, only to find they had known them all along. The doctrinal lineage of this technique, as we will discuss shortly, extends far beyond the barren deserts of North Africa.

The reverse slope defense is perhaps in its purist form (not unlike most tactical methods) little more than an outgrowth of man's cunning and desire to destroy his enemy. As the nature of war and the battlefield changes, the conventional military perspective changes right along with it. Traditionally, at the heart of the reverse slope issue, terrain and concealment have always played the dominant role. Time and again, military forces chose concealment behind a crest to conserve fighting strength, create surprise, or deceive the enemy.

The same can be said for modern doctrinal applications. Reverse slopes are generally employed when:

- the forward slope becomes untenable because of enemy fire
- when the forward slope has been lost
- when the terrain on the reverse slope provides better fields of fire than are available on the forward slope
- when it is essential to surprise and deceive the enemy.

Not unlike the general characteristics just mentioned, the form of the reverse slope defense underwent an evolution as well. Historically, this was initially characterized as a tendency for forward movement from a concealed (rearward) location that had required little or no preparation. We see some of this predilection on the allied side through 1917 and early 1918, as exemplified by the U.S. 1st Infantry Division's use of the reverse slope at Cantigny, France in May 1918. In a more modern sense, however, the reverse slope acquired three distinct variations: (1) the commander located the "main line of resistance (MLR) [forward] for maximum surprise fire on the enemy as he crossed the skyline. Hence, the most important factor influencing the location of the frontline troops was [an unobstructed] field of fire to the crest;" (2) the commander's desire was "to use as much as possible the fields of fire afforded by the forward slope, but at the same time reduce exposure to observed enemy fire;" (3) the commander finds "the forward and reverse slopes are unsuitable as locations for the battle position, the hill may still be denied to the enemy or made excessively costly to him by using the reverse slope as a field of fire for positions located on other hills [counterslopes]."21

An analysis of the applications and variations outlined above makes it undoubtedly clear that the reverse slope defense will always require adaptation to the local situation. Careful adaptation of the technique in consonance with the factors of METT-T and the imperatives of combat will allow the commander to focus on the object of the reverse slope or any defense, that of "imposing maximum casualties on the enemy forward of the position, to deceive him as to the true location of the main defensive effort and to obtain maximum effective surprise fires as the enemy closes in the main battle area."22

Clausewitz's maxim, that "the defensive form of war is...a shield made up of well-directed blows" was obviously tailor-made for a reverse slope discussion. The image of a well thought out, properly focused, and dynamically executed reverse slope defense creates the shield from which the commander projects a bold, flexible

offense. The implications derived from this somewhat short examination are very important to the contemporary light infantry leader.

While the reverse slope is not offered up as a panacea for every infantryman's problems, it is suggested as a realistic and contemporary defensive alternative for light forces facing modern-equipped heavy units. My sensing is that if the technique is used correctly, by a willing and dedicated light infantry commander, then the survivability and effectiveness of his unit in combat will be increased markedly. The following historical examples will serve to prove my point.

#### WELLINGTON

In his analysis of European armies and military reforms during the early part of the 1800's, the noted historian Peter Paret observed that "the pre-Revolutionary armies were compelled to fear the unforeseen because their means of dealing with it were imperfect."<sup>23</sup> In a vain attempt at overcoming the unknown, some armies immersed themselves in theory, while others wrote volumes on every conceivable battlefield contingency. Clausewitz, on the other hand, understood that "war is the realm of accident." General Hans Von Yorck supported that notion writing "there are no unfailing recipes in the art of war, only general principles of mobility, firepower, concentration of force, [and] retention of reserves, in whose appropriate application to diverse circumstances could be sought the key to effective fighting."<sup>24</sup> At the time, no one in England better understood this fact than Arthur Wellesley, Duke of Wellington.

Though the lineage of the reverse slope extends farther back in time<sup>25</sup>, its best historical accounts appear to begin with the Duke of Wellington. Like Sir John Moore before him, "strategically, Wellington was a master at choosing the correct defensive or offensive policies to fit circumstances, able to transfer from one to the other at the most opportune moment."<sup>26</sup> Hence, coupling this ability with a reverse slope defense, Wellington time and again was able to produce fear and panic among his foes and victory for his troops on the battlefield. What was his secret?

Basically, whenever on the defense Wellington sought to put "the [light] infantry, when feasible...on reverse slopes, its flanks secured by terrain features, with thick skirmish swarms thrown out, to emerge at the last moment and subject the approaching (French) columns to a steady fire from flanks and front, succeeded by a short counterattack."<sup>27</sup> Wellington refined this tactic from Maida to the Peninsula, training his soldiers to analyze the terrain, seek protection, concealment and surprise from behind its mass, and to move forward only when the enemy's closeness masked supporting fire.<sup>28</sup>

At Waterloo, Wellington put this training to its ultimate test. Numerous historians have recorded how d'Erlon's Corps of 16000 men, marching in four huge columns, attacked at four o'clock in the afternoon only to be defeated by General Picton's division concealed in a reverse slope defense south of Mont St Jean.<sup>29</sup> The lessons drawn from Wellington are as important for light infantrymen today as they were for the British infantry in 1815. Commanders must create a natural alliance with the terrain. If they do, this alliance can yield opportunities for innovation, surprise, concealment, and the result of effective preparation--victory. Wellington understood this fact and continued throughout his career to refine the reverse slope technique. At Bussaco, he experimented with a carefully widened path for faster movement between the flanks of his reverse slope position; at Waterloo in 1815, he created fortified outposts and strongpoints to further strengthen his reverse slope positions against the French bombardments. Creativity and daring are but a part of Wellington's legacy to us; regrettably our forefathers, on the eve of World War One, had forgotten that the two concepts were inseparable.

#### WORLD WAR I - GERMAN AND U.S. APPLICATIONS

The American government declared war on Germany in April 1917 and the dictum of 1914 was still in effect; modern war required but one kind of infantry--good infantry.<sup>30</sup> It was General Pershing's desire by 1918 "to prepare an integral American force capable of taking the offensive in every respect; this plan was based primarily

upon the development of a self-reliant infantry, by thorough drill in the use of the rifle and the tactics of open warfare."<sup>31</sup> Unfortunately for the American Expeditionary Force, the German Army months before had begun planning for its reception. One of the cornerstones of their plan was the reverse slope defense.

For the most part, the early evolution of German defensive tactics was predicated on French and British methods of attack. By the "summer of 1915, German General Falkenhayn directed that a new reserve line was to be situated 2500-3000 yards behind the front line....and wherever possible it was to be on a reverse slope (Hinterhang)."<sup>32</sup> Within a year, the defense had evolved into three successive zones and by 1917 it consisted of five zones. "If terrain permitted, the main line of resistance (located in the second, or battle, zone) was on a reverse slope."<sup>33</sup>

The Germans, having perfected their craft over a period of years, found numerous critical characteristics inherent in their reverse slope positions. These characteristics included acknowledging the efficacy of the machine gun, and the fact that while the reverse slope did not maximize a gun's maximum range, experience had shown that a sudden surprise fire, rather than prolonged long-range engagements, defeated attacks. Additionally, the ground provided the advantages of surprise, protection from enemy ground observation, and observed artillery fires while decreasing the attackers ability to be supported once he crossed the crest. These advantages coupled with extensive wire obstacles, strongpoints, interconnecting trenches, and massed fires offered German defenders a near impregnable defense. Finally, and most importantly, the Germans felt the key to a successful reverse slope was a swiftly executed counterattack and above all an organization instilled with an aggressive spirit.<sup>34</sup> The combined effect and proper utilization of these characteristics in the German defense during the battle of Loos, France, 25 September 1915, produced the following effect: "The men of the 15th (Scottish) Division came streaming over the summit and down the reverse slope unsupported by artillery fire, so that a few German machine guns...placed in the reserve line were able to annihilate them.

Over a thousand men of the 15th Division were caught on this bare slope...and were all eventually killed or taken prisoner."<sup>35</sup> In another sector, 385 officers and 7800 men of two British Divisions suffered a similar fate, under similar circumstances, within the same period of a few hours. In this engagement, one machine gun alone fired 12,500 rounds. In the light of such successes, there can be little doubt that the German Army understood well, not only the terrain but the efficacy of the reverse slope technique. Conversely, what about the leadership in the A.E.F.--did they understand the intricacies of the reverse slope defense?

As stated above, Pershing's infantry was to be "self-reliant" and offensively minded, but an offensive was not in the immediate offing. By the winter of 1917, the allies had "adopted a defensive system based upon captured German documents. Unfortunately for the allies, they did not completely grasp the spirit (e.g. emphasis on counterattack units) of the German doctrine. This shortcoming would be evident when the Germans unleashed their offensive in March 1918."<sup>36</sup> Additional research of the doctrinal literature published by the A.E.F., during the period 1917-1918, shows a striking similarity between the French and British "how to fight" pamphlets and the German methods (less its spirit) discussed above. For example, in July 1917 the War Department issued Infantry in the Defense (French translation); from this manual, the following similarities to the German reverse slope emerge:

- necessity for machine guns echeloned in depth.
- necessity for defenses, especially for the second and third lines of each position, to be on the reverse slope.
- counterattacks must be executed immediately.
- reverse slope positions were preferred for support elements and command and artillery observation posts.

Although probably reflecting little more than assimilation of French and British interpretations of German doctrine, the first American discussion of the advantages and disadvantages of positions in special situations took place in July 1918.<sup>37</sup> Specifically, the document shows a clear relationship to contemporary notions of the reverse slope in portraying the following schematic:





Figure 2

While the text of the original discussion can be found at Appendix A, the essential point to be noted is that the American military was at last developing a critical thought process about the reverse slope, a process for which later generations of American infantrymen would have been immensely grateful had their leaders remembered the lessons of the First World War.

#### WORLD WAR II - GERMAN AND JAPANESE APPLICATIONS

As I alluded to earlier in the review of doctrinal literature, the carryover of European influence on U.S. reverse slope doctrine apparently nullified any original thought on the subject prior to or during World War II. Not until the later stages of the war did field commanders, writing in open sources, remind the Army of the devastating effects of a properly emplaced reverse slope defense. In the interim, many American lives were lost on forward slope defenses as a result of a lack of reverse slope understanding, training, and doctrine. Having arrived at this position, I feel it will be far more instructive to briefly analyze the German and Japanese methods of employing the reverse slope in WWII than to discuss American trial and error. First, I will examine the main characteristics of the German reverse slope technique.

In World War II, "the German Army built its modern defensive system on three basic principles.... These principles were depth, invisibility, and readiness for action (Schlagfertigkeit)."<sup>38</sup> On the eastern front, these principles took the form of deceptive or evasive tactics wherein forward positions executed a surprise withdrawal at the last moment before an imminent attack. "Depending on the terrain and local fortifications, it was usually quite sufficient to withdraw the most forward troops 900-2000 yards. Here was the forward edge of the battle position, a

well-camouflaged organized system of defense that took advantage of all favorable terrain features [reverse slopes]."<sup>39</sup> On the other fronts, the German Army exhibited the same degree of resourcefulness, cunning, and creativity.

With respect to the question of locating defensive positions in mountains, Luttwak informs us that "the 1935 tactical manual left the choice open, according to the necessities created by particular tactical conditions; but it did recommend the back slope position in general.... But the German mountain warfare manual of 1944 unambiguously called for the back-slope position for mountain [light] infantry and anti-tank troops whenever possible. The reason...was that by 1943 the Germans had lost their former superiority in firepower...and cover had become more important than fire."<sup>40</sup> Equally important, tactics had evolved to make use of the unique, though offensively oriented, style of delaying which German mountain troops had perfected through rigorous training.<sup>41</sup>

While these key characteristics were of paramount importance, the German reverse slope philosophy contained other key traits. Built around the concept of task organizing to the ground (rather than the unit), German reverse slopes consisted of an all-around defense (see Appendix B), internal fire control boundaries, comprehensive fire plans, and flank and rear fires oriented to strengthen forward strong points. Supplementing the main defensive positions were battle outposts, active patrols well forward to discover enemy dispositions, and numerous well camouflaged primary, alternate, and dummy positions. As in World War I, German militarists understood the importance of the personality of the commander, the example he sets for his men, and his level of experience. Finally, German defensive philosophy shared Clausewitz's view that the object of the defense was to gain time pending development of a situation which allowed offensive action.<sup>42</sup>

It is impossible, within the confines of this paper, to provide an exhaustive list (nor do I necessarily want to) of German reverse slope characteristics. The central thrust of what has been provided, however, should emphasize the fact that

German reverse slope thinking and doctrine, vastly different from our own, was effective. History, indeed, had provided the Germans useful evidence supporting the necessity for a reverse slope doctrine; trial and error forged it into a deadly technique worthy of emulation by light infantry forces everywhere.

Meanwhile, half-way around the world, American infantrymen were fighting an enemy every bit as tenacious as the Germans. By the summer of 1945, Japanese forces were engaged in a "last ditch" effort on Okinawa. The focus of my analysis of Japanese reverse slope techniques will be on one particular engagement of the larger battle--on Okinawa--the fight on Kakazu Ridge. I have chosen this example believing that it best illustrates the final evolution of the Japanese method.

A month after the fall of the island, U.S. sources reported that Japanese defensive tactics on Okinawa had changed considerably since Attu. There, the Japanese focus "was to defend beaches with the intention of defeating us [U.S. forces] before we could get ashore."<sup>43</sup> Japanese lack of a well-developed, all-around defense, however, proved to be their undoing. The battle on Okinawa and the preparation of the Kakazu defenses, on the other hand, were decidedly different. The Japanese realized, as early as Tarawa in November 1943, that light infantry survivability and effectiveness rested primarily on a defense in depth, on key terrain, supplemented by hardened mutually supporting installations, both above and below ground; obstacles and mines which canalized enemy armor; superior camouflage; numerous alternate positions; massed indirect and machine gun fires; and localized, well-coordinated counterattacks. The reverse slope positions in Kakazu matched that description perfectly.

On 9 April 1945, COL T.E. May, Commander of the 383rd Infantry Regiment, 96th Infantry Division, ordered the 1st and 3rd Battalions of the 383rd Infantry to seize the Kakazu hill mass. "The Japanese-held area in front of the 383rd offered the enemy an ideal combination of defensive measures. A deep moat, a hill studded with

natural and man-made positions, a cluster of thick-walled buildings behind the hill--these were the basic elements of Kakazu stronghold [and] the enemy had exploited each one of them."<sup>44</sup>

Japanese troops of the 62d Division, 32d Army had been in the process of preparing defensive positions in their sector for over ten months. "In and around the Kakazu hills, the Japanese had created one of their strongest positions on Okinawa. Mortars dug in on the reverse slope were zeroed-in on the gorge and on vulnerable areas between the gorge and the crest.... In an intricate system of coordinated pillboxes, tunnels, and caves, Japanese machine guns were sited to cover all avenues of approach. The enemy was also supported by many artillery pieces."<sup>45</sup>

While the strength of the Kakazu defenses depended upon "a profound knowledge and clever use of the terrain, the maximum effectiveness of available weapons, and a will to fight to the death,"<sup>46</sup> the Japanese, like the Germans, put to use the fruits of their tactical labor. From 9 April until the 32d Army's counteroffensive on 13 April, elements of the 62d Division had stopped COL May's regiment cold with a solid reverse slope defense. In addition to the points already mentioned, the Japanese reverse slope plan on Kakazu consisted of numerous hidden mortar positions (see Appendix C), "silent" machine gun positions oriented on elements making flanking movements, anti-tank ditches, minefields, and flamethrowers. If the terrain permitted, Japanese fire planning included flanking fires from adjoining slopes, and strict fire control measures which oriented on separating mutually supporting attack elements from each other and from their reserves. Like the Germans, a key ingredient in the Japanese plan was the vicious, well-coordinated counterattack of platoon to company strength launched as soon as the enemy reached the topographic crest of the ridge. Lastly, the Japanese had learned the value of conducting rehearsals. In February 1945, they conducted a full rehearsal of the actual battle of Kakazu Ridge.

In summing up this battle, the G2, 24th Corps stated, "The strength of the [enemy's] position was amply demonstrated by our inability to gain and hold critical

terrain in front of the 96th Division. Further, the enemy quickly showed his determination to hold these positions by launching repeated, vigorous counterattacks to regain critical terrain features....The active defense was only exceeded by the use of his artillery and mortars."<sup>47</sup>

Once again the crippling effect that determined, well-led light infantry can have was exhibited throughout the reverse slope positions of Kakazu Ridge. After six horrible days of intense fighting, Kakazu Ridge fell at a cost of several hundred U.S. lives. But not before the Japanese Army retaught the 96th Division one of war's basic lessons--do not underestimate the resourcefulness and cunning of an enemy occupying a reverse slope defense. It was a lesson that other American Divisions would re-learn in Korea.

#### KOREA

U.S. Army pre-Korean War reverse slope doctrine changed very little from 1945 to 1950. In both FM 7-10 Rifle Company, Rifle Regiment (Oct 49) and FM 7-20 Infantry Battalion (Mar 50), little of consequence concerning reverse slope defense was discussed except for one reference to the placement of the main line of resistance vis-a-vis the reverse slope. Subsequently, of the reverse slope combat examples and articles I examined, the following information seems the most noteworthy (for our discussion) from the Korean period: (1) the Chinese Communists, for the most part, utilized an amalgamation of Japanese reverse slope techniques to include the use of forward elements, construction of strong defensive positions, construction of deceptive positions, and the placement of automatic weapons forward with heavy weapons in depth. (2) At least one author during the war reminded his audience in the Infantry School Quarterly that principles in war (in this case principles of the defense) are not rules, and "there is no rule of thumb applicable in all terrain and situations."<sup>48</sup> (3) Finally, a Marine Corps Gazette article provided not only the best reverse slope combat example but a discussion of why the 'school solution' worked in saving the lives of numerous Marines--the Marines had followed the basic elements of their reverse slope doctrine.<sup>49</sup>

## LESSONS LEARNED

In analyzing the historical good and bad points of the reverse slope defense, I believe we can draw an early conclusion that proper utilization of the technique has resulted, time and again, in favorable tactical outcomes. It helped crack the onslaught of the French at Waterloo, the British at Loos, and the Americans at Kakazu. It has not, in and of itself, won any battles or campaigns, but it has immeasurably contributed to the success many infantry units have enjoyed on the battlefield. In almost all cases, a good reverse slope defense has consisted of:

- aggressive small unit leadership capable of seizing the initiative or feats of daring.
- friendly strength applied against enemy weakness at the critical moment through either massed fires or counterattacks.
- surprise designed to steal the initiative.
- violent, hasty, or deliberate counterattacks.
- flexibility to react to enemy actions.
- a durable, well prepared defense supported by engineers and time to develop the defense.
- a defense which neutralizes the enemy's ability to detect the friendly unit's center of gravity.
- a defense organized and based on a collection of hills which is oriented to fighting, not to the possession of terrain.
- a solid task organization consisting of small, self-sustaining units grouped in ideal fashion (angriffsgruppe).

In assessing the weaknesses (or bad points) of the reverse slope, one finds few specific examples. However, the traits which appear to be the most formidable include vulnerable flanks, less supportable forward detachments (unless fires are available from adjacent hills), and inflexibility created by the terrain-relational nature of the technique. Additionally, the reverse slope imposes unfavorable limits on friendly observation, requires knowledgeable leaders for its execution, and above all, in view of its decisive nature, requires that the enemy be ejected immediately upon reaching the topographic crest.

Notwithstanding these drawbacks, I feel numerous "lessons learned" exist for the light infantry from among the examples discussed. Those which are most important are:

- (1) The light infantry must have a thorough reverse slope doctrine to use as a base for training and future experimentation.

(2) Any reverse slope doctrine must be all inclusive, yet allow for innovation, cunning, and flexibility.

(3) The uniqueness of the light infantry requires leaders who understand the battlefield. Future combat will not permit expenditure of time on the establishment of a defensive philosophy which involves gaining an appreciation for terrain, weapon systems, or people. Leaders will have to hit the ground running in the next war.

(4) The exercise of initiative and audacity in the reverse slope defense must be aimed exclusively at the destruction of the enemy's morale and his will. Light infantry force must create such opportunities through the maximization of combat power, good leadership, surprise, and aggressiveness. Violent counterattacks may possibly be the single most important factor in achieving victory for light forces in the reverse slope defense.

(5) A well-thought-out and well-executed reverse slope defense can be characterized as "a shield made up of well-directed blows" when the commander maximizes: the use of his automatic weapons, massed long range indirect fires, surprise, cover and concealment, counterattacks, obstacles and mines, the aggressive spirit of his troops, positions in depth, unit task organization, reconnaissance, forward positions, fires from adjoining slopes, and strict fire control.

While neither these lessons, nor the characteristics listed above, present an all inclusive list, the fact remains that the reverse slope defense, when used properly, yields significant results. The critical historical evidence provided establishes its efficacy. It is leading us in a direction through which light infantry effectiveness and survivability can be enhanced. An analysis of the contemporary perspective will be helpful in order to understand.

### SECTION III. REVERSE SLOPE--THE CONTEMPORARY STATUS

"Light infantry tactics are in essence American Indian tactics, conducted in restrictive terrain by disciplined forces with organized support--artillery, air, and logistical. Their effectiveness is obtained from terrain and their deceptive style and tempo of operations."<sup>50</sup>

#### CONTEMPORARY INFLUENCES ON THE LIGHT INFANTRY

The ideal defense, as alluded to throughout this paper, is a bold, flexible, offense-oriented defense. In each of the historical examples cited, the leadership of the units involved possessed a certain coup d'oeil which matched this contemporary notion of the defense. Additionally, the characteristics applying to a "light infantry attitude," one should agree, were also in evidence as an intrinsic part of the situations described. Comprehension of the value of the reverse slope defense should enable us to enhance the survivability and effectiveness of the light infantry on the modern battlefield. But in order to adapt this technique effectively to modern combat, we must understand the factors on the contemporary battlefield which require us to make that adaptation. Therefore, it is my intention to analyze what has changed from the historical perspective (if anything), and what effect that change may have on the light infantry forces of the modern Army.

I think it is important in this analysis to first look at what has not changed--the defense itself. In 1897, William Balck restated an essential truth of war, already hundreds of years old, remarking, "the weak point of the defense lies in the fact that the attacker is numerically or morally stronger, and more untrammelled, being free to select the place and moment of the decisive stroke. The defender is tied to the ground; he must be in readiness day and night...to parry the blow which may descend on some unexpected spot."<sup>51</sup>

Today, the American Army and its light infantry forces in particular face, in a Soviet confrontation, a dilemma similar to that portrayed by Balck. If forced to defend we will, in all probability, confront a numerically superior enemy who will attempt to select the time and place for a decisive stroke. Like our historical



predecessors, our task has not changed and continues to be one of ensuring that the opportunity for a decisive stroke does not occur in the enemy's favor. However, since the beginning of the Cold War, the methods we employ in our various tactical doctrines (as exemplified by our current Airland Battle doctrine), have adjusted to our enemy with what many agree to be a far more aggressive design. It is a doctrinal design which pushes to the limit our technology, military leadership, and political alliances.

Nonetheless, in spite of the additional changes brought about by the spectre of nuclear or chemical warfare the U.S. Army's doctrinal emphasis remains directed primarily at a conventional deterrence. It is a deterrence which can succeed "by generating superior combat power in battles and throughout campaigns."<sup>52</sup> It is generally agreed this combat power depends on people, armaments, and "sound, well-understood, and practical concepts for fighting." These last few words are particularly important to our contemporary discussion. They remind us that we are obligated to provide our forces not only a philosophy, but the ingredients for winning as well. From my perspective, this also includes the little understood technique of the reverse slope defense.

Not too long ago, General (Ret) William DePuy, writing in Army magazine, stated that, "In the set of new light divisions, the Army has a force which is strategically mobile and tactically versatile in its preferred terrain. The challenge to Army commanders will be to integrate this new capability into successful 'operations'."<sup>53</sup> While General DePuy's comment could not be more correct--that is, having light forces does not mean just putting them on the nearest piece of slow-go or no-go terrain--his subsequent comments addresses the heart of the doctrinal issue. Specifically, he stated that "the operational art which is now being revived and strengthened in an Army which has been tactically preoccupied since Korea is the art of conducting successful campaigns using high performance tactical units, within a strategy for winning wars"<sup>54</sup>--i.e., Airland Battle.

The heart of the issue, is that the Army has been without an operational perspective for thirty years. Since the publication of the 1982 edition of FM 100-5 however, the Army has managed ever so slowly to realize what General DePuy has implied--simply, that the Strategic and Operational levels of war are inextricably linked. What we must not forget in the process is the fact that the tactical level is also inextricably linked to these two levels. Hence, we might conclude that if we now have a sound operational doctrine, then it goes without saying that our concomitant tactical doctrine should likewise be sound. Unfortunately, as discussed earlier, I do not believe the tactical doctrine is as strong as it could be--at least with regard to defensive situations requiring special consideration like the reverse slope.

#### CURRENT REVERSE SLOPE DOCTRINE

Prior to the revision of FM 7-20 The Infantry Battalion in April 1978, the Army had finally achieved in its 1969 edition an adequate balance in its portrayal of the reverse slope defense. In reviewing the FM 7-20 series from 1942 to 1969, I have determined that balance was achieved only after a long evolutionary period. Therefore, we might infer that change (for the better) was effected over time, only to have, in 1978, the times effect change (for the worse). In removing the reverse slope discussion from FM 7-20, the message to the field was simple--the topic is no longer important enough for battalion level consideration. Hence, because the technique has been removed from FM 7-20 and is all but missing from FM 90-6 Mountain Operations, the sole source of information for a reverse slope defense is relegated to FM 7-10. Later, between December 1984 and June 1985, the source problem was somewhat remedied by the publication of three field circulars dealing with light infantry tactics and ARTEP mission training plans. Though containing no new twists, the presence of the reverse slope defense as an ARTEP task suggests that it has renewed importance for the light infantry.

Although I applaud Fort Benning's initiative, it is sad to note that the "new"

guidance in the circulars, like that found in FM 7-10 (January 1982), is too short, too weak, and, in my opinion, an impoverished representation of what might have been provided. Specifically, the diagrams fail to provide a conceptual depth which addresses forward or flank actions, obstacles, or counterattacks; and, the descriptions fail to define or describe the term, the types of reverse slopes, or the options available. More importantly, there is a failure to acknowledge that the key to a reverse slope is not just control of the crest, but control of the enemy, the seizure of the initiative, and the destruction of the enemy's will.

To correct these shortcomings, the only plausible solution would be to rewrite what has been issued. In the short term, I do not think this is very likely; however, the future editions of FM 7-10, FM 7-20, and FM 90-6, for instance, must include a revitalized discussion of the reverse slope defense which teaches the intricacies of the technique to soldiers and leaders alike. The doctrinal update provided at Appendix E is an example of what I mean.

Aside from changes which have occurred in doctrine, methodology, and the contemporary nature of warfare (i.e., nuclear warfare), there is one other important area of change to be noted. Specifically, I am referring to the operational environment and the changes which have occurred in the Threat.

#### OPERATIONAL ENVIRONMENT

There can be little doubt that the transformation of Soviet forces over the last thirty years represents a significant change in our perception of "the threat." Equally important, this transformation currently represents one of the biggest difficulties for U.S. light infantry thinkers and planners--how best to fight light forces against heavy, mobile forces. While answering this broad question extends beyond the scope of this paper, it is appropriate within our scope to analyze some of the components of Soviet offensive methodology, Soviet views of the terrain, and Soviet artillery techniques. The purpose of this effort will be to further assess the validity of employing light infantry in the reverse slope against Soviet heavy forces.

In his book Red Armor, Richard Simpkin, in a statement of the Soviet concept of land operations, noted that "the primary [Soviet] aim is to nullify the enemy's ability and will to fight."<sup>55</sup> Almost any reading of Soviet operations shows that such an attempt consists of the use of massive firepower at the point of rupture. But according to Simpkin such an attempt is also evidence of a certain mindset often displayed in flat or hilly terrain resembling a desire to attack directly into and through a defense rather than avoiding it<sup>56</sup> (See Appendix D for a schematic of Soviet formations). Conversely, in mountainous terrain, Soviet doctrine takes a different view of the attack by preferring that such a position "should not be attacked head on; encircling and flanking movements are always the most effective."<sup>57</sup>

While neither situation presents an insurmountable problem for light forces, since the Soviets' methodology appears to be "business as usual," it does cause reflection on the larger question of how light forces should defend against heavy, mobile forces. While I would agree that any number of defensive techniques might work, I feel that these situations demonstrate the light infantry's uniqueness and provide the opportunity for defensive change. In either of these cases, the reverse slope is applicable (and preferable) since enemy fires would be masked (by the crest) in the frontal attack, and flanking attacks would be hindered by incorporating several crests (distance permitting) into one reverse slope position. The key to remember is the flexibility afforded by the reverse slope in relation to standard Soviet operational practices.

Soviet views of terrain provide a second interesting area of analysis in fighting light forces against heavy forces, particularly from a reverse slope position. In his report on "The Soviet Army of the Second World War," Edward Luttwak noted "the Soviets have an almost fanatical regard for possession of dominating terrain... no matter whether it actually dominated the terrain, [or if] the situation demanded its possession."<sup>58</sup> In fact, he points out, German World War II observations berate the Soviets tactically for their terrain preoccupation. Richard Simpkin's research

into current Soviet concept of the terrain, while generally agreeing with Luttwak adds a rather interesting twist noting "by contrast one finds running through the [Soviet] writings and evinced in their doctrine not so much a tendency to ignore ground as an active distrust of it,"<sup>59</sup> a distrust which extends to both natural cover and terrain configuration. The problem for the Soviets, he concludes, "is evidently how to reconcile the need to use ground in low-level fire and movement with the achieved levels of skill of their junior officers and senior NCO's, with the high tempo by which they set such store, and with the rigidity of control...."<sup>60</sup>

Presentation of this account was not intended to criticize the capability of Soviet combat leaders; instead it is provided as yet another mental trigger for light force leaders in thinking how best to overcome the Soviets' heavy maneuver advantages. A close reading of Simpkin shows again and again the points of Soviet potential weakness in timing of supporting fires, lack of desire to tie in flanks during an attack, and a myopic view of the battlefield. For light infantry exploiting the reverse slope, these weaknesses can be translated into opportunities which can increase the success (for example) of deception efforts, surprise ATGM shots from flank positions, and the execution of limited counterattacks originating from concealed rearward positions during the hours of darkness. While a counterargument might be that these actions could be accomplished just as well from any other defensive technique, my feeling is that a higher degree of success is possible in the reverse slope because of the psychological predisposition associated with the technique--the predisposition of cunning, surprise, and the ability to wage the war on terms of our choosing.

Soviet artillery techniques provide the third and final area of concern in our discussion of light infantry employment in the reverse slope against heavy forces. For some time the upgrading of Soviet artillery units and their concomitant "firing norms" have caused concern among our combat leaders. Most sources agree that while regiments have an organic artillery battalion, it appears that tank and mechanized

battalions are acquiring an organic gun or multi-barelled rocket launcher battery.<sup>61</sup> While these changes, in and of themselves, are not spectacular, the capability of achieving or exceeding "target neutralization norms" are. Bellamy reports that these norms may amount to as much as 2217 shells for each 300x200 meter (six hectare) position.<sup>62</sup>

Light infantry defending in the path of Soviet heavy forces certainly must recognize the potential danger created by target norms. Given that artillery fires will be joined by tank, ATGM, and direct fire artillery weapons, light infantry forces have only two real alternatives--to dig in deep (if they have chosen to defend on a forward slope) or to move to the rear slope, which affords masking from direct fire weapons and some neutralization of indirect fire. Additionally, in the following comment regarding Soviet fires, C.N. Donnelly supports the contention that the reverse slope may offer greater survivability for light infantry forces, stating, "when fire is shifted from the forward edge of the position towards the rear and flanks, the difficulty most often encountered is that the density of fire becomes too low, uneven, and dispersed."<sup>63</sup> For light forces occupying a reverse slope this means that after the Soviets fire their preparation on the forward military or topographic crest, fewer artillery rounds may be landing on the reverse slope as the Soviets transition their fires forward.

In assessing the changes which have occurred in doctrine, the threat, and the contemporary nature of warfare, we come naturally to the point of asking if any of the changes have made the lessons recounted invalid. The answer is unequivocally no. On the contrary, we have found in each assessment more reason to strengthen the original claims. The weaknesses discovered in doctrine, for example, only reemphasize our need for a sound, thorough doctrine which provides light forces a firm base upon which to conduct training and experimentation. Similarly, in regard to the changes brought about by the threat, we find, again, that it is essential that our light infantry leaders understand and maximize the unique qualities and capabilities of

their units. The key to winning, survivability, and effectiveness depends on that understanding. While this appraisal has been based on sound judgement of reverse slope experiences up to the Korean War, it is necessary to turn to contemporary reverse slope examples in the Falkland Islands which both validate my hypothesis and substantiate the estimates above.

#### VALIDATING LESSONS LEARNED IN THE FALKLANDS

The British campaign in the Falklands, according to Major D.A. Corbett, 3 Para Battalion, was "as far as the modern battlefield is concerned...not unique or revolutionary in any way, be it in numbers of men fighting, equipment, or tactical lessons learned."<sup>64</sup> In fact, the average soldier described the campaign as little more than a prolonged training exercise. There were however, very specific instances where the superiority of the reverse slope, over the more traditional forward defensive position, was clearly evident. The following two examples are representative of the larger group.

First, "throughout the campaign the Argentinians (U.S. trained) based all their defenses upon forward slope positions, albeit in depth...[lured] to the enormous temptation to site defenses where they could see considerable distances to their front (due to the lack of cover)...their choice of forward slope defensive positions was to prove disastrous and probably the single most important contributory reason for their failure to hold their positions."<sup>65</sup> This failure to adopt the reverse slope was observed specifically at Darwin Hill and Boca House where the British used MILAN ATGM's (max range 2000m) to destroy Argentine forward positions one by one; and at Mt Longdon, Two Sisters, and Wireless Ridge where the British "were able to build up accurate intelligence on Argentinian defensive layouts prior to attacking and seizing the positions."<sup>66</sup> In this latter example, British sources point out that "had the Argentinians adopted reverse slope main positions...with OP's, with night viewing devices on the forward slopes, the British would have been denied this detailed knowledge and an element of surprise would have been maintained by the Argentinians."<sup>67</sup>

A second example was provided by the commander of 3 Para. During an interview, Colonel Hew Pike reiterated the point that British units did not utilize forward slope positions during the campaign. At the San Carlos beachhead, for example, he placed his battalion on the reverse slope of Windy Gap in the expectation of an Argentinian counterattack. In organizing this position, Colonel Pike stated he ordered observation posts forward of the topographical crest for immediate observation, a screen of OP's from the patrol company, 4-8 km's forward of the FEBA, and his rear elements to be prepared to confront enemy air assault elements with MILIAN's GPMG's, and CVR's. Furthermore, while a defense in depth with all-around coverage was SOP, Colonel Pike directed that obstacles (mines) were not to be emplaced unless he received orders to retain the position for a substantial period of time. Communications throughout the reverse slope were also by SOP--wire was the primary source with radio backup.

Elsewhere in the San Carlos beachhead, the reverse slope was chosen over a forward position defense for the following reasons:

- "if the enemy counterattacked, they could be engaged initially by indirect and long range fire weapons."
- "once the enemy crested the ridge they would be within the 350 meter maximum effective range" of infantry small arms.
- "surprise could be achieved."
- "administrative requirements" such as logistics "could be accomplished in daylight and out of view of the enemy."
- "protection from enemy harassing indirect fire."
- once British troops cleared Argentine forward positions, these same positions become reverse slope positions for friendly troops, thus protecting British soldiers during consolidation from enemy direct fire coming from the next forward position.<sup>68</sup>

Although Major Corbett stated earlier that the Falklands exhibited no new or unique tactical lessons, he was, we should not forget, referring to the British Army not the American Army. Since we are not currently advocates of the reverse slope technique, the following remarks might serve not only as "lessons" from the Falklands, but also as substantiation for arguments previously presented:

- (1) An Army that understands and practices the reverse slope defense possesses a psychological edge when facing an enemy that does not.



(2) The Falkland campaign showed "the vulnerability forward slope positions have to direct fire weapons."

(3) Reverse slope positions possess greater strength and take less preparation time vis-a-vis forward positions under enemy observation and fire.

(4) Obstacles and mines need to be placed around and within main defensive positions and between those positions and the counterslope reserve positions to ensure the enemy is slowed and forced to deploy.

(5) Flanks need to be heavily mined and covered by fire.

(6) Effective observation forward and aggressive patrolling day and night is absolutely essential to success.

(7) Effective fire planning (massing fires) is crucial to breaking up attacks and providing the cover for the launching of counterattacks.

(8) The commander must be cognizant of the fact that it is unwise to generalize about the terrain (or a particular reverse slope position) since so much depends on the prevailing circumstances.

(9) To gain and maintain the initiative, the enemy's main attack must be broken up before the FEBA.

(10) Above all, the reverse slope battle is a battle of wits and a clash of wills in the MBA. Only the unit which is the most cunning, the most vicious, and possessing the most desire will win.<sup>69</sup>

Concluding our analysis of the reverse slope in the Falkland campaign, we once again need to take stock of what is new and what application it has for U.S. light infantry forces. Generally, little "new" information surfaced from the above analysis. Most of the stated truths, however underutilized, were generally known throughout the light infantry community beforehand. The last point, nevertheless, deserves renewed attention from light soldiers. The concept of will while occasionally misunderstood or undervalued, has a solid military historical foundation. Accordingly, light infantry, more so than any other type of force, needs to examine the examples contained in that foundation and apply them.

From a capabilities standpoint on the other hand, the reverse slope affects light infantry forces in a less philosophical manner. We have already discussed that light forces are more capable of surviving massed fires, and more capable of surprise and deception so long as they remain well concealed on both forward and reverse slopes. Counterattacks have a better chance of succeeding given the massing

of friendly fires within the MBA, while being obscured from overwatching enemy positions. Similarly, the enemy's capability is decreased, and friendly capability increased, due to limits on observation and lack of intelligence of friendly unit strength. Additionally, light infantry capability is increased because of the ability to provide a position for conserving the combat power of "worn down units." Lastly, the reverse slope defense provides the light infantry commander the flexibility of taking advantage of his terrain by adjusting the reverse slope to a "reverse forward slope" or other rearward location. As LTC John English stated, "the determining factor is that fires [within the battle area] must fall on the reverse slope to the extent this area can be converted into an inferno of fire."<sup>70</sup>

The overall impact of this discussion leads to but one conclusion: the lessons developed from our historical examples are still valid. Certainly changes have occurred in the areas of technology which affect the nature of war, but in the aggregate, the reverse slope still serves the same function as it did at Waterloo--it provides the combat commander a cunning method by which he can cause fear and panic in his enemy and victory for himself. Without question, we can deduce there plainly exists, both doctrinally and historically, sufficient evidence supporting a case for the revival and use of the reverse slope for the light infantry.

#### SECTION IV. IMPLICATIONS OF REVERSE SLOPE DEFENSE: CONCEPTUAL AGENT FOR CHANGE?

So if you'll take a tip from me and live to fight again--  
You'll bank your hopes on rear of slopes and save the lives  
of men.--Court<sup>71</sup>

#### CONCLUSIONS

LTC Court, a combat veteran of World War II, capsulizes in the verses above precisely the message of this paper; he emphasizes the crucial importance of the reverse slope defense--both to win the battle and save the lives of men. My goal is to resurrect the reverse slope technique so that "ignorance, short sightedness, and unpreparedness", which extracted a high toll of infantrymen in past U.S. conflicts, "a toll that the United States...should not have [had] to pay,"<sup>72</sup> will not occur again among light infantry leaders.

In order to minimize "short sightedness and unpreparedness," I have concluded that the reverse slope defense must be rejuvenated and reincorporated into the Army's doctrine--particularly FM 7-20 for the light infantry battalion. This reemphasis on the reverse slope will also have a positive effect on training, weapons development and employment, and may impact on the very future of the light infantry.

#### LESSONS LEARNED

The lessons derived from that conclusion, some of which were highlighted throughout the preceding pages, can be summarized into the following key ideas:

(1) The light infantry's current reverse slope doctrine lacks efficacy. Having provided rationale in support of my belief that the current doctrine requires strengthening, I have included, at Appendix E, a reverse slope doctrinal "cookbook" which, if used, will provide infantrymen with a better understanding of the intricacies of the reverse slope technique, and a "recipe" for employing light infantry in the reverse slope.

(2) Leadership is the crucial ingredient in reverse slope planning and execution. Capturing the uniqueness of the light infantry's capabilities requires leaders who understand terrain, the threat, and themselves. Audacity, cunning, and initiative must be developed in leaders; likewise, our leaders must develop the mental toughness that will enhance their ability to triumph in the "clash of wills" surely to be found in the violence of the reverse slope defense.

(3) The reverse slope defense is not one concept, but a host of concepts which breed potential success.

(a) It is a concept which actively pursues offensive opportunities, through surprise and deceptive actions, with the intent of stealing the initiative, imposing the commanders will on the enemy, and breaking the enemy's morale.

(b) It is a concept which invigorates soldiers with the spirit of cunning, resourcefulness, and ferocity.

(c) It is a concept though oriented on denying the topographic crest to the enemy is, in reality, a bold, flexible, offense-oriented defense consisting of "a shield made up of well-directed blows." This shield consists of (but is not limited to) a well laid out and thoroughly integrated obstacle and fire plan, positions in depth, and vicious hasty and deliberate counterattacks designed to annihilate the enemy from any possible direction.

(d) It is a concept which affords the defender a variety of options in positioning his troops; each option designed to draw the enemy into unfamiliar terrain.

(e) It is a concept uniquely suited to light infantry forces, in hilly or steeply sloped areas, who find themselves facing Soviet or Soviet-surrogate heavy forces.

(f) It is a concept which enhances light infantry effectiveness and survivability.

Underlying each of these key concluding ideas is a comprehension of the combat environment. How does this understanding influence light infantry training and the development and employment of light infantry weapons?

#### TRAINING

Just as the current requirement for leaders in the 7th Infantry Division (Light) to be ranger school graduates is an attempt to focus on the unique mission and requirements of light infantry, rejuvenation of the reverse slope defense emphasizes the unique attributes of light infantry in the defense. Supporting this view, Miksche points out that "during modern battle different kinds of fighting take place at different points simultaneously--here defense, there attack....clearly for infantry to fight such a swaying melee, it needs not only a reorientation in tactics, leadership, organization...but needs more a psychological reorientation of the troops."<sup>73</sup> From this latter point, we can infer that we need to show our light infantry soldiers, through training, that the use of a deceptive measure like the reverse slope is not to be judged as a loss of initiative, or offensive spirit, but a conservation of combat power and a development of shrewdness which develops low-risk, high payoff

opportunities. For example, in designing small hasty counterattacks for the reverse slope, we might consider the German WWI method of "small unit tactics and...decentralized command and control....the 'stormtroop' (stosstruppe) consisting of seven men relying on 'mission procedures' (auftragsferhahen)"<sup>74</sup> to accomplish the mission. Suffice it to say we could use many other examples to show the value of the reverse slope and its potential effect on light infantry training. It is better, however, having provided a foundation for ideas and experimentation, to allow the "field" to judge what works and what does not.

#### WEAPONS

Like training, weapons development and employment can be affected by the stimulus of the reverse slope. In wargames conducted at the School for Advanced Military Studies, for example, I observed several situations (including reverse slopes) involving light infantry defending against heavy-equipped threat units. In each case, my conclusion (and that of my peers) was that the light infantry - whether fighting in flat terrain or in terrain appropriate to the reverse slope - needed not only more, but better LAW and DRAGON ATGM's. Repeatedly, the outcome of light force engagements were affected by those quality or quantity factors.

While Mao reminds us that people (not things) are decisive, there can be little argument but that light infantry forces require the best weapons available. COL Huba Wass de Czege lists a host of these in his article "Three Kinds of Infantry."<sup>75</sup> Additional readings suggest the application of satchel charges, molotov cocktails, surveillance equipment, light mobile diggers, Kelvar cocoons, SAM's, anti-tank grenades, MK19 40 MM's, Precision-Guided Munitions (PGM's), and fiber-optic guided (FOG) weapons as being effective in a reverse slope defense. What is important for soldiers in the reverse slope, however, is to have weapons that can maintain a "battlespace" by defeating the enemy at maximum distances. Failing that, he must rely on achieving the effect of synergism by maximizing the combat power from his weapons in combination with the protection of his position, and the leadership of

his unit. The achievement of that effect is the real key of any defense--reverse slope or otherwise.

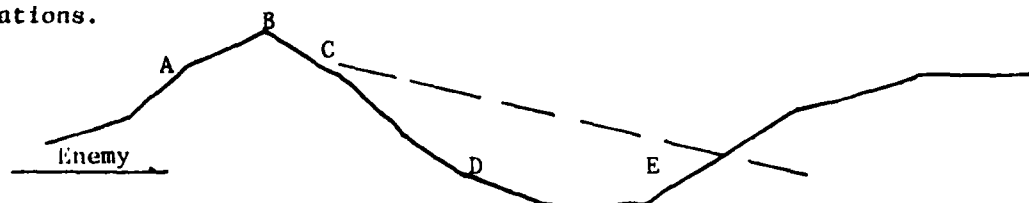
#### AGENT FOR CHANGE

In conclusion, I find that the relevance of this study lies less in helping the light infantry prepare for the future, than in reminding the light infantry of its past and the effect that past has played upon the conduct of combat operations. Today, the areas of conflict are great and our potential adversaries many. It is simply inadequate to tell our troops "Let's go and get 'em." We, as leaders, are obligated to the task of ensuring our soldiers are the best equipped, best trained, and best led in the world. If this paper changes one light infantry leader's attitude about war, or, one infantryman's plan to use a forward slope defense when the reverse slope defense would be better, or turns one soldier into a more cunning, resourceful member of his team, then my mission will have been a successful one. Perhaps LTG William R. Richardson summed it up best when he stated, "As members of the profession of Arms we must be sensitive to the demands of change, visionary in our examination of their implications, and creative in our adaptation of combat organizations, tactics, and techniques."<sup>76</sup>

## Appendix A: World War I Description of the Reverse Slope

### "Instructions for Defensive Combat of Small Units"

A study of the advantages and disadvantages of the various sites shown in the following figure will assist one in selecting a good position to meet special situations.



a. At A there is a good field of fire and distant observation, but artillery support is very difficult on the slopes in front of A. For however slight the slopes in front of A may be, field artillery can effectively reach them close in front of the advance line only by batteries placed in flanking positions (if it be possible to find favorable positions for proper development of fire). Moreover, hostile artillery readily sees trench A. The enemy can effectively support his infantry.

b. At B there is distant observation, but the field of fire B-A is usually short. All terrain in rear of B is concealed from hostile observation. Artillery support on terrain B-A is very difficult as this terrain is seen only from B.

c. At C (reverse slope) distant observation of the enemy is entirely lost. The field of fire C-B is short, but there are no difficulties of close artillery support. The enemy has distant observation on B, but beginning at C the terrain has a large dead angle from enemy's observation. Hostile artillery will have difficulty in firing on slope C-D.

d. At D there is the benefit of good support by artillery, and on the other hand, hostile artillery support will be difficult. All ground in rear of D is subjected to hostile observation and fire.

e. At E there is a large field of fire, the enemy's ground is well observed, artillery support is good, but the enemy has the same advantage. The ground from E

to the next crest in rear is subjected to hostile observation and fire.

From the above it is seen that the position at C presents important advantages for employing the means of defense in holding the position. The lack of observation of the hostile position decreases the possibility of action against the enemy at all times, and especially in case of offensive operations. One should, therefore, seek to obtain the advantage derived from having observation without losing the advantage of reverse slope positions. To retain observation, the position in front of the crest is selected and attempt is made to lessen the inconveniences of this position, which consist principally in difficulty of artillery support, by organizing a dense flanking fire (infantry and artillery).

\*From the A.E.F. pamphlet, "Instructions for the Defensive Combat of Small Units-Infantry Platoon to Regiment," July 1918, pp. 30-31.



Appendix B. German Company (WWII) in a Defensive Position\*

(incorporating reverse slope technique)



\*Taken from page IV-24, TM-E-30-451, 1 Mar 45

Appendix C. Typical Reverse Slope Mortar Position\*

d. Mortar Emplacements -- Where the terrain permits, mortar emplacements are usually sited on the reverse slopes. Occasionally, they may be found on the forward slopes. The emplacements are dug about 4 feet deep and provided with overhead

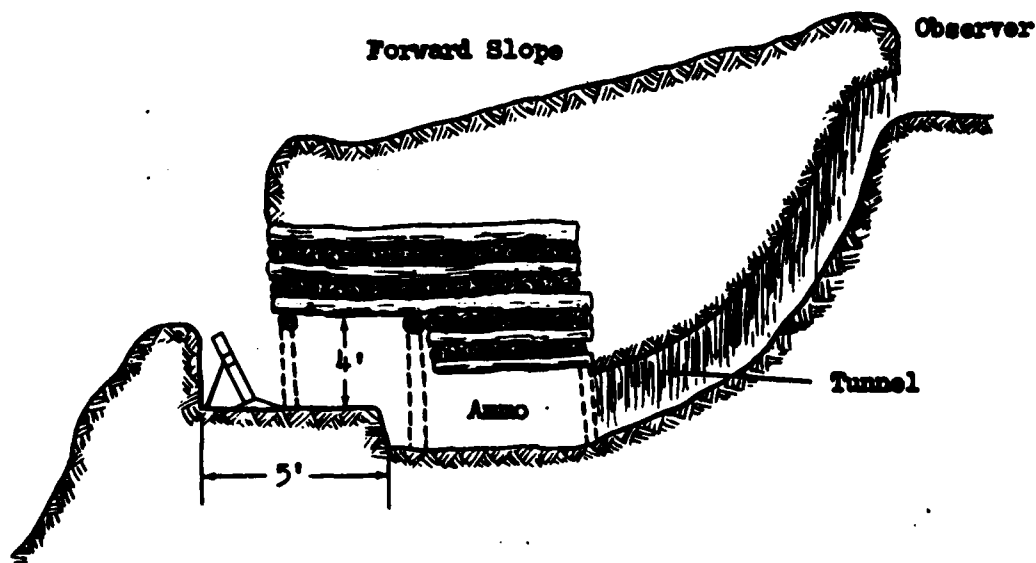
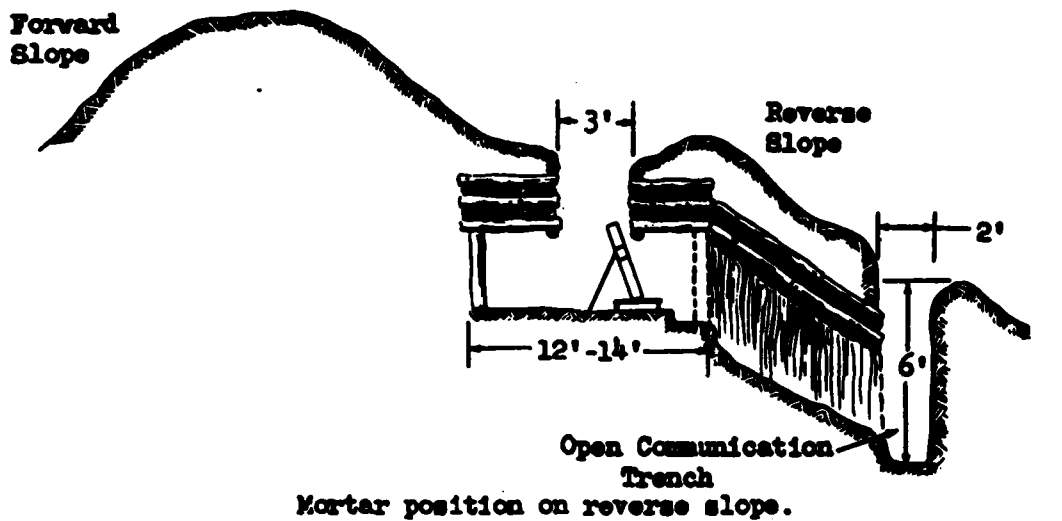


FIGURE 4

\*Taken from page 4, Enemy Field Fortifications in Korea, Jan 52

## Soviet Army Attack Formations in Mountainous and Hilly Areas

If space does not permit deployment into open battle order, i.e. line abreast for the whole of the first echelon, then the battle order can be deeply echeloned, stretching back along the valley (Fig. 1). This is not an attack in two echelons but in one deep echelon. To cope with terrain features, the attack formation can be made concave to right or left (Fig. 2); with an open flank it should be "stepped off" to that flank (Fig. 3); down a narrow valley it should be echeloned in arrowhead formation (Fig. 4).

When the defense is strong and shod in depth, it is Soviet practice on flat ground to attack in two echelons, or waves. This is not practicable in mountainous country, and the standard practice is therefore to attack in one echelon with a strong reserve for any eventuality.

Use of forward detachments, a favourite Soviet tactic, will rarely be made in mountainous terrain unless it is to forestall the enemy in deployment into his defensive positions. When attacking a prepared enemy, the Soviet Commander in the mountains will resort to the Outflanking detachment (*obkhodyashchiy otryad*). This is usually sent out

- a) by a battalion: to launch a coordinated attack on the enemy rear so as to aid a frontal assault by the main forces; or
- b) by a regiment or a division:
  - (i) to do as at (a) above; or
  - (ii) to destroy enemy outposts, weapons or command posts;
  - (iii) to capture heights, glaciers, river crossings, etc., in the enemy rear and hold them until the arrival of the main forces;
  - (iv) to prevent the enemy from withdrawing and ensure his encirclement and destruction.

In size, the outflanking detachment can be anything from a platoon to a battalion group as appropriate, but a strong company is the most common. It can move on foot or in vehicles, or use a combination of means, but its essential principle is that it penetrates unseen into the enemy rear and achieves its success by surprise. If necessary, the main forces will carry out diversionary shelling or an attack for deception purposes to cover the outflanking detachment's move. If it meets an enemy en route, it will avoid action if possible. A small enemy group might be engaged by the vanguard and destroyed by a

flanking attack by the main force of the detachment. A large enemy group that could not be ignored would be engaged by the vanguard in the hope that the main forces of the detachment could slip past and complete the mission.

A motor rifle company acting as an outflanking detachment will normally operate up to ranges of 10 km, where it can be provided with artillery support, although it will usually take mortars even if moving on foot. A battalion outflanking detachment will often operate up to 15 km forward of the main forces. Airborne battalions are trained to operate further in the enemy rear, and are supported by Mi-24 *Hind* helicopters en call, rather than by artillery.

An outflanking detachment will always be as self-contained as possible and will normally carry at least:

- 1/2 a *boyevoy Komplekt* (standard unit of fire) for small arms,
- 1 full *boyevoy Komplekt* for mortars and anti-tank weapons,
- extra anti-tank and anti-personnel hand grenades; and tank mines and explosives for 2-3 demolitions.

A typical outflanking detachment is shown at Fig. 5.

In the exercise from which this example was chosen, the regimental advance (in STR-SOPs) was held up by enemy action. The outflanking detachment was deployed on skis across country to seize a key gap in a ridge and prevent the enemy moving up reserves. The detachment moved through low mountains covered in woods and surprised the enemy platoon guarding the road through the gap.

When a battalion acts as an outflanking detachment, it does not necessarily operate as a unit. On occasion the formation commander may provide sufficient helicopters to lift one company into the enemy rear to enable the detachment to seize the key point by means of a coordinated attack from two sides.

If two routes to the same target exist, then a battalion group will often be broken up to form two outflanking detachments, with the task of making a coordinated assault.

The BMP is considered to be a very suitable vehicle for use in mountain terrain, especially in such tasks as those of the outflanking detachment, because of its excellent cross-country performance and its heavy armament. The latter permits it to give fire support to an attack on foot up to 2.5 km away, using its anti-tank guided missile launcher as an accurate artillery weapon just to keep the defenders' heads down.

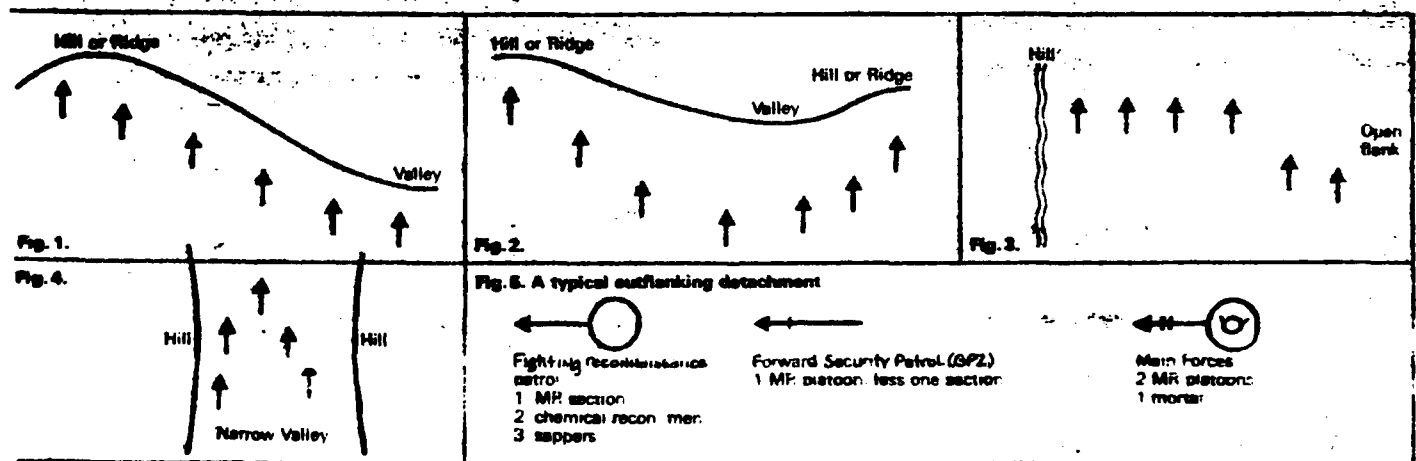


FIGURE 5

\*Taken from page 829, *International Defense Review*, June 1980

## Appendix E. Reverse Slope Defense Doctrinal Update\*

### I. General

a. Definition. A reverse slope defense is one organized on the portion of a terrain feature or slope that is masked from enemy direct fire and observation by the topographical crest and extends rearward from the crest only to the maximum effective range of small arms fire. All or any part of a unit may be on the reverse slope, depending on an analysis of the mission, enemy, terrain, troops, and time available. A successful reverse slope defense is based on denying the topographical crest to the enemy either by fire or by physical occupation. Ideally, the reverse slope defense will take the form of a bold, flexible, offense-oriented defense consisting of "a shield made up of well-directed blows."

b. Characteristics. An expedient or deliberate reverse slope defense may be considered when any of the following conditions exist for elements of a unit:

(1) When the forward slope lacks cover and concealment, and effective enemy fire makes that position untenable.

(2) When the forward slope has been lost or has not yet been gained.

(3) When the terrain on the reverse slope affords appreciably better fields of fire than are available on the forward slope.

(4) When it is desirable to avoid creating a distortion or dangerous salient in friendly lines by relying on forward slope positions.

(5) When possession of the forward slope is not essential for indirect fire observation.

(6) When it is essential to surprise and deceive the enemy as to the unit's true defensive positions or main effort.

(7) When seeking to gain protection from the enemy's mass fires (nuclear, chemical, or conventional).

(8) When conservation of friendly combat power is essential.

(9) When light infantry forces find themselves facing Soviet or Soviet-surrogate forces in terrain requiring special defense consideration (e.g., fighting in marshy, barren, moderately forested, urban, or most importantly, hilly or steep slope areas) and those forces are heavier in artillery, air support, and other long-range weapons.

### c. Advantages and Disadvantages

#### (1) Advantages

(a) Enemy ground observation (including radar) of the battle area is masked by a topographical crest, which in itself affords concealment.

(b) Enemy stand off, long-range, and direct fire flat trajectory weapons cannot effectively fire on the position.

(c) The enemy may be deceived as to the true strength and location of defensive positions or the main effort, causing him to deploy early and attack blind against the forward slope.

(d) Enemy indirect mortar and artillery fires are neutralized as a result of a lack of observation.

(e) Tactical surprise may be gained by the defender.

(f) Friendly forces have greater freedom of movement within the battle area because the enemy lacks ground observation; this enhanced mobility allows for detailed improvement of rearward positions, ease of supply, and rest for troops.

(g) Combat power of the defender is concentrated on smaller enemy elements who must close to reach the crest and in doing so silhouette their presence.

(h) Heavy enemy units are forced to fight a battle at the range of light infantry weapons. In turn, light forces can hold their fire until a kill is a certainty.

(i) The reverse slope defense maximizes the effect of light infantry tactics and techniques by forming a shield behind which the force executes its offense-oriented defense.

(j) Selection of a reverse slope position causes the defender to analyze his terrain more thoroughly and act upon its strengths and weaknesses accordingly (e.g., in creating a comprehensive obstacle plan).

(k) In some localities, the ground requires forward slope positions. A reverse slope defense allows the defender to keep the absolute minimum number of men at those forward slope positions with the remainder of the unit on the reverse slope in covered and concealed positions.

(l) Counterattacks can be rehearsed in relative security, and fire control measures can be more clearly and deliberately defined. During the execution of counterattacks on the reverse military crest, counterattacking forces are not exposed to overwatching 2d echelon fires.

(m) In mountainous terrain, depth can be achieved in the defense by including two or more successive crests within the position (if distance permits).

(n) Reverse slope positions provide some protection from nuclear blast, radiation, and thermal effects.

(o) Night vision devices are less likely to give away the detailed location of the defensive position.

(2) Disadvantages

(a) Friendly unit observation of the enemy may be limited by the topographical crest.

(b) The defender may be unable to effectively cover line fields and obstacles to his front with direct fire weapons.

(c) Fields of fire for direct fire weapons (MGs, ATGMs, and tanks) are restricted and without adequate observation. The effectiveness of friendly direct and indirect fires may be limited.

(d) If the topographic crest is lost, the enemy will have not only the psychological advantage, but also the advantage of attacking downhill while friendly counterattacks must be made uphill.

(e) The greatest weakness of the reverse slope lies in the danger of an unexpected mounted attack on the flank. Soviet doctrine stresses the envelopment. Consideration must be given to assigning sufficient forces and obstacles to flank protection. Turning the flank turns the reverse slope position into a forward slope position.

(f) The potential threat of observation from enemy aircraft and helicopters requires the highest standards of camouflage and defensive position construction.

(g) Detachments occupying observation posts on the forward slope can only be relieved at night. During daylight, they must remain essentially motionless. Additionally, some repositioning must take place at night to strengthen the forward positions against surprise attacks or infiltrators.

(h) The reverse slope technique is generally limited in use to hilly or mountainous terrain (i.e., it is terrain relational).

(i) The reverse slope is more vulnerable to night attacks unless forward detachments or observation posts are emplaced and reinforced at dusk.

## II. Organization of the Reverse Slope Defense.

a. A reverse slope defense is designed to impose maximum casualties on the enemy forward of the position, to deceive him as to the true location of the main defensive area, to obtain maximum effective surprise fires as the enemy closes in the main battle area, and to deny the enemy the topographic crest.

b. Types of reverse slope positions. The three general types of reverse slope positions will require innumerable modifications to suit local conditions and can frequently be employed in combination with one another or with a defense based originally on the forward slope. These types include: (1) the FEBA is located on the forward military crest but with main defense positions located and protected on the reverse slope; (2) the main battle position is located on the reverse slope or counterslope supported by fires from hills to the rear or from flanks; (3) the main battle position is located on the counterslope supported by fires from its crest which dominate the reverse slope, topographical crest, and forward slope to its front. Fires and counterattacks from flank positions are included in the destruction of enemy forces (see enclosure 1).

c. It is mandatory that a reconnaissance and security element, acting more in the role of a guard than a covering force be placed forward of the main battle area to stop, or delay the enemy (gain time), disorganize his attack if possible, and deceive him as to the exact location of main defense positions. The location of additional supporting forces (from individual machinegun positions to those of squad size elements) lying in wait along the enemy's avenue of approach will further serve to delay, deceive, and disrupt the enemy and weaken his morale.

d. Forward detachments should be established during daylight near, or forward of, the topographical crest to provide long-range observation (from a minimum of 5-600m to the maximum possible) of both the flanks and front. These groups, which can be provided from the reserve, may vary from a few men to squad size in each

position. Composition of these detachments should include elements from FIST teams, numerous crew served weapons including SAW's, M-60's, Dragons, a few TOW's, rifle-men for security, and a few armored vehicles if the terrain permits. Sufficient detachments are employed across the entire front (in a series of OP's and fighting positions supplemented by dummy positions) to provide observation and security for the MBA on ground which should be held at all costs. During the hours of darkness, these detachments must be strengthened to provide security against infiltration or surprise attacks. Aggressive night patrols are an essential supplement to this reinforcement process.

e. The main defensive position (for the close-in battle) is organized according to the fundamentals contained in the current doctrine. An essential feature is the requirement for good grazing fields of fire from the reverse slope positions to the crest. This assumes that the forward defensive positions will be within small arms range of the crest, with all positions covering every suspected route into the defensive sector as well as covering the various defiladed obstacles to their front. In the case of a defense on a counterslope, fires must cover the area immediately in front of these positions to the reverse slope and topographic crest immediately to its front. Organization of defensive positions, in either location, should permit fires to be delivered on enemy approaches around and over the crest, and on the forward slopes of adjacent terrain features if applicable. The inherent key factors which affect the organization of these areas are well dug and interrelated covered and concealed positions, numerous natural and man-made obstacles (see enclosure 2 for example), the ability to bring devastating fire from all available weapons onto the crest, and preparation of a substantive counterattack force. Counterattacks may originate in forward positions consisting of a few men (hasty ctak), or may be executed from the reverse (deliberate catk).

f. Reverse position. The most desirable location for the unit reserves, depending on terrain, may be on the counterslope (reverse forward slope), or on the reverse military crest of the counterslope. In either case, the key is a position which blocks an enemy penetration and supports forward elements by fire. Aside from supporting the main defensive area, these forces have responsibility for: the unit's rear battle, counterattacks, preparation of routes of withdrawal, flank security, indirect fire support, the provision for supplying forward detachments, and assisting in the evacuation of casualties.

g. Fire Support.

(1) M-60's, SAW's, and other automatic weapons are placed where they can deliver the most effective surprise fire on the enemy. "Silent" automatic weapon positions designed to strike the flanks and rear of passing enemy units may also be employed. Anti-tank weapons should be positioned in concealed locations where their ranges can best be maximized. This may include positioning with the forward, reserve, or flank elements.

(2) Indirect fires and close air support should be planned for the deep, main, and rear battle areas of the defense. In particular, fires must be planned to support all counterattacks. Final protective fires are normally placed along the topographic crest or forward military crest of the hill to deny its use to the enemy. It cannot be overemphasized that immediate, indirect fire registration must take place either while emplacing the reverse slope defense or upon retaking the crest after a counterattack. Weapons should be registered to the limits of their range and on any terrain feature from which an enemy commander might try to control his operations.

h. METT-T and Principles of War. Commanders assessing the various dynamics of a reverse slope opportunity would be wise to use both METT-T and the imperatives of combat as the foundation of their analysis.

III. Conduct of the Reverse Slope Defense--A quick scenario. The conduct of a reverse slope defense parallels that of a conventional defense in several ways (see enclosure 2). The process begins with deep attacks by the recon and security element contacting, disrupting, and deceiving the enemy. The commander's intent should be to steal the initiative and impose his will on the enemy force. Flank elements, arranged to support the recon and security force, also assist in creating surprise while eliminating the enemy's ability to conduct surprise flanking maneuvers. The forward edge of the close-in battle is fought by forward detachments who, besides providing advance warning of the enemy's approach, attempt to further delay, disrupt and canalize him via long-range indirect fires, and obstacles such as wire, mines, booby traps, and small ambushes. Observation and fires are maintained over the entire forward slope as long as possible to destroy enemy forces thus preventing the enemy from massing for a final assault. From the defensive positions within the reverse slope itself the close-in battle takes on its most violent form. Direct fire weapons located throughout the MBA (adjacent slope positions, counterslope positions, or reverse slope positions) withhold their fire until suitable targets appear, as indirect fires are shifted onto the forward military slope and the crest. If the enemy crosses the topographical crest, the FPFs are fired as the enemy reaches the first belt of defiladed obstacles set before him. Counterattacks must be executed repeatedly with unremitting violence, savagery, and shock. Counterattacking elements may come from the reverse or from any element (in actuality) along covered routes or not, with the sole purpose of ejecting the enemy from the topographic crest, at the point of a bayonet if need be. Reserve units not employed in the counterattack will assume responsibility for elements which break through to the rear area or which attack from flank avenues of approach.

\*Format for this Appendix was extracted from FM 7-20 (Dec 69). The material is a synthesis of the following: FM 7-10 (Apr 70), pp. 4-17-19; FM 7-20 (Dec 69), pp. 5-28-29; Balck's Modern European Tactics, pp. 302-304; English's "The Other Side of the Hill," pp. 17-20; Tompkin's "Reverse Slope Defense," pp. 30-33; Muller's, "Reverse Slope Defense," pp. 128-140; Br Army Land Opns Vol II, Part II Battlegroup Tactics, pp. 25-28; and, personal study and analysis of a wide range of reverse slope situations and combat examples.



## Variations of Reverse Slope Positions

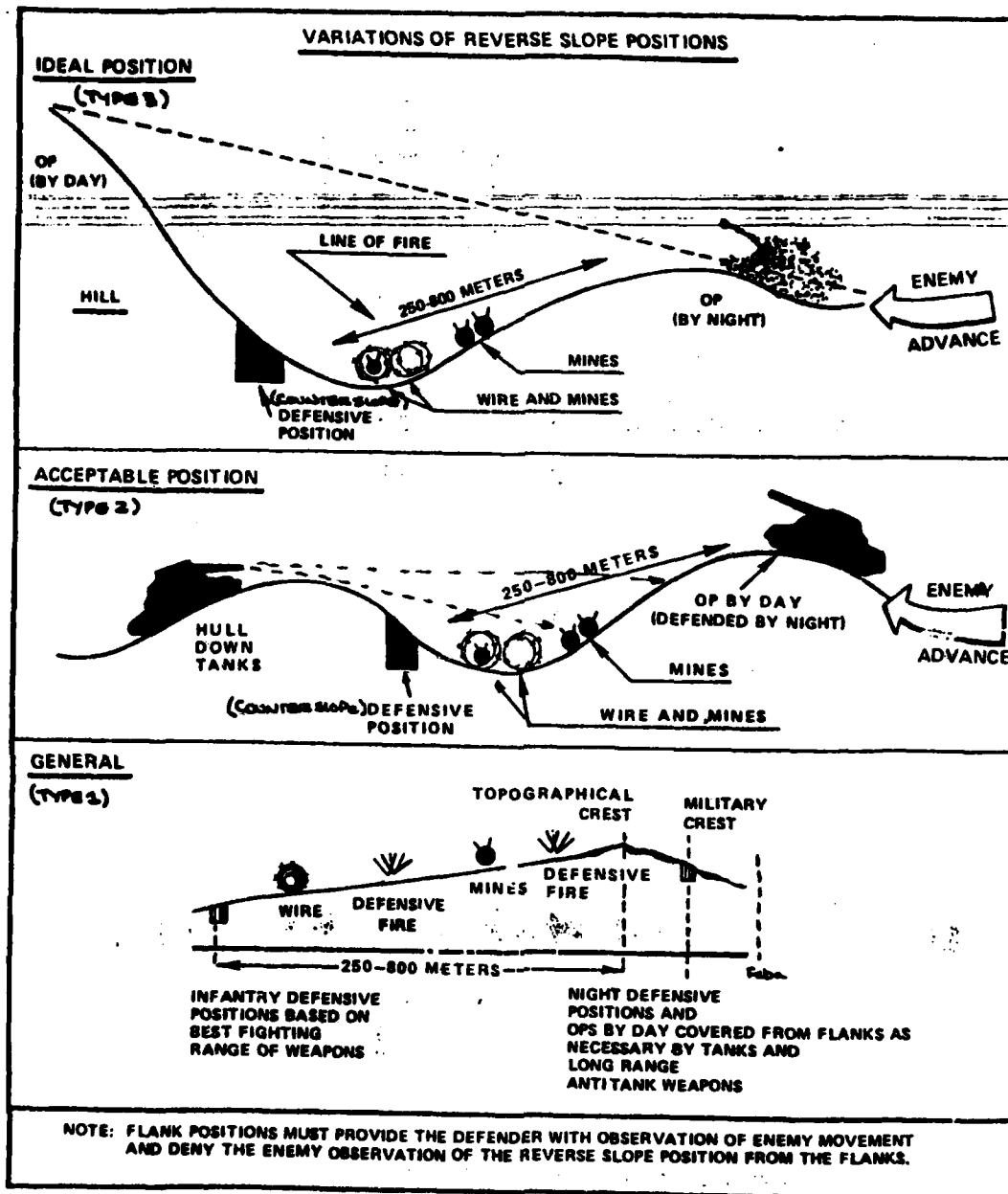
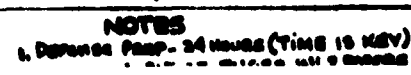


FIGURE 6

Enclosure 1 to Appendix E



**Figure 7**

#### ENDNOTES

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### Interviews

Colonel Hew Pike. Colonel Pike, Commander of the 3 Para Battalion, proved helpful in understanding the operations conducted by 3 Para and the intricacies of the reverse slope in the Falkland Islands. Colonel Pike was interviewed September 19, 1985 in Seattle, Washington.

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